



BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XD531

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals

Incidental to Rocky Intertidal Monitoring Surveys along the Oregon and California Coasts

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received an application from the Partnership for Interdisciplinary Study of Coastal Oceans (PISCO) at the University of California (UC) Santa Cruz for an Incidental Harassment Authorization (IHA) to take marine mammals, by harassment, incidental to rocky intertidal monitoring surveys. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to PISCO to incidentally take, by Level B harassment only, marine mammals during the specified activity.

DATES: Comments and information must be received no later than [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Comments on the application should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910. The mailbox address for providing email comments is ITP.Nachman@noaa.gov. NMFS is not responsible for e-mail comments sent to addresses other than the one provided here. Comments sent via e-mail, including all attachments, must not exceed a 25-megabyte file size.

Instructions: All comments received are a part of the public record and will generally be posted to <http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm> without change. All Personal Identifying Information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

An electronic copy of the application containing a list of the references used in this document and associated Environmental Assessment (EA) may be obtained by writing to the address specified above, telephoning the contact listed below (see FOR FURTHER INFORMATION CONTACT), or visiting the internet at:

<http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm>. PISCO's 2013-2014 monitoring report can also be found at this website. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Candace Nachman, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will

have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking, other means of effecting the least practicable impact on the species or stock and its habitat, and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined “negligible impact” in 50 CFR 216.103 as “...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.”

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as: “any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].”

Summary of Request

On July 30, 2014, NMFS received an application from PISCO for the taking of marine mammals incidental to rocky intertidal monitoring surveys along the Oregon and California coasts. NMFS determined that the application was adequate and complete on August 22, 2014. In December 2012, NMFS issued a 1-year IHA to PISCO to take marine mammals incidental to these same proposed activities (77 FR 72327, December 5, 2012). In December 2013, NMFS issued a second 1-year IHA to PISCO to take marine mammals incidental to these same proposed activities (78 FR 79403, December 30, 2013). The 2013 IHA expires on December 16, 2014.

The research group at UC Santa Cruz operates in collaboration with two large-scale marine research programs: PISCO and the Multi-agency Rocky Intertidal Network. The research group at UC Santa Cruz (PISCO) is responsible for many of the ongoing rocky intertidal monitoring programs along the Pacific coast. Monitoring occurs at rocky intertidal sites, often large bedrock benches, from the high intertidal to the water's edge. Long-term monitoring projects include Community Structure Monitoring, Intertidal Biodiversity Surveys, Marine Protected Area Baseline Monitoring, Intertidal Recruitment Monitoring, and Ocean Acidification. Research is conducted throughout the year along the California and Oregon coasts and will continue indefinitely. Most sites are sampled one to two times per year over a 4-6 hour period during a negative low tide series. This IHA, if issued, though, would only be effective for a 12-month period. The following specific aspects of the proposed activities are likely to result in the take of marine mammals: presence of survey personnel near pinniped haulout sites and approach of survey personnel towards hauled out pinnipeds. Take, by Level B harassment only, of individuals of California sea lions (*Zalophus californianus californianus*), harbor seals (*Phoca vitulina richardii*), and northern elephant seals (*Mirounga angustirostris*) is anticipated to result from the specified activity.

Description of the Specified Activity

Overview

PISCO proposes to continue rocky intertidal monitoring work that has been ongoing for 20 years. PISCO focuses on understanding the nearshore ecosystems of the U.S. west coast through a number of interdisciplinary collaborations. The program integrates long-term monitoring of ecological and oceanographic processes at dozens of sites with experimental work in the lab and field. A short description of each project is contained here. Additional

information can be found in PISCO's application (see ADDRESSES).

Dates and Duration

PISCO's research is conducted throughout the year. Most sites are sampled one to two times per year over a 1-day period (4-6 hours per site) during a negative low tide series. Due to the large number of research sites, scheduling constraints, the necessity for negative low tides and favorable weather/ocean conditions, exact survey dates are variable and difficult to predict. Table 1 in PISCO's application (see ADDRESSES) outlines the typical sampling season for the various locations. Some sampling is anticipated to occur in all months, except for January and September.

Specified Geographic Region

Sampling sites occur along the California and Oregon coasts. Exact locations of sampling sites can be found in Tables 1 through 3 of PISCO's application (see ADDRESSES). Due to the large number of research sites, scheduling constraints, the necessity for negative low tides and favorable weather/ocean conditions, exact survey dates are variable and difficult to predict.

Detailed Description of Activities

Community Structure Monitoring involves the use of permanent photoplot quadrats which target specific algal and invertebrate assemblages (e.g. mussels, rockweeds, barnacles). Each photoplot is photographed and scored for percent cover. The Community Structure Monitoring approach is based largely on surveys that quantify the percent cover and distribution of algae and invertebrates that constitute these communities. This approach allows researchers to quantify both the patterns of abundance of targeted species, as well as characterize changes in the communities in which they reside. Such information provides managers with insight into the

causes and consequences of changes in species abundance. Each Community Structure site is surveyed over a 1-day period during a low tide series one to two times a year. Sites, location, number of times sampled per year, and typical sampling months for each site are presented in Table 1 in PISCO's application (see ADDRESSES).

Biodiversity Surveys, which are part of a long-term monitoring project and are conducted every 3-5 years at established sites, involve point contact identification along permanent transects, mobile invertebrate quadrat counts, sea star band counts, and tidal height topographic measurements. Table 2 in PISCO's application (see ADDRESSES) lists established biodiversity sites in Oregon and California.

In September 2007, the state of California began establishing a network of Marine Protected Areas along the California coast as part of the Marine Life Protection Act (MLPA). Under baseline monitoring programs funded by Sea Grant and the Ocean Protection Council, PISCO established additional intertidal monitoring sites in the Central Coast, North Central Coast, and South Coast study regions. Six additional sites will be established and sampled in the North Coast study region during 2015 (see Table 3 in PISCO's application). Baseline characterization of newly established areas involves sampling of these new sites, as well as established sites both within and outside of marine protected areas. These sites were sampled using existing Community Structure and Biodiversity protocols for consistency. Resampling of these sites may take place as part of future marine protected area evaluation.

The intertidal zones where PISCO conducts intertidal monitoring are also areas where pinnipeds can be found hauled out on the shore at or adjacent to some research sites. Accessing portions of the intertidal habitat may cause incidental Level B (behavioral) harassment of pinnipeds through some unavoidable approaches if pinnipeds are hauled out directly in the study

plots or while biologists walk from one location to another. No motorized equipment is involved in conducting these surveys.

Description of Marine Mammals in the Area of the Specified Activity

Several pinniped species can be found along the California and Oregon coasts. The three that are most likely to occur at some of the research sites are California sea lion, harbor seal, and northern elephant seal. On rare occasions, PISCO researchers have seen very small numbers (i.e., five or fewer) of Steller sea lions at one of the sampling sites. These sightings are rare. Therefore, encounters are not expected. However, if Steller sea lions are sighted before approaching a sampling site, researchers will abandon approach and return at a later date. For this reason, this species is not considered further in this proposed IHA notice.

We refer the public to Carretta et al. (2014) for general information on these species which are presented below this section. The publication is available on the internet at: http://www.nmfs.noaa.gov/pr/sars/pdf/pacific2013_final.pdf. Additional information on the status, distribution, seasonal distribution, and life history can also be found in PISCO's application.

Northern Elephant Seal

Northern elephant seals are not listed as threatened or endangered under the Endangered Species Act (ESA), nor are they categorized as depleted under the MMPA. The estimated population of the California breeding stock is approximately 124,000 animals with a minimum estimate of 74,913 (Carretta *et al.*, 2014).

Northern elephant seals range in the eastern and central North Pacific Ocean, from as far north as Alaska and as far south as Mexico. Northern elephant seals spend much of the year, generally about nine months, in the ocean. They are usually underwater, diving to depths of

about 330-800 m (1,000-2,500 ft) for 20- to 30-minute intervals with only short breaks at the surface. They are rarely seen out at sea for this reason. While on land, they prefer sandy beaches.

Northern elephant seals breed and give birth in California (U.S.) and Baja California (Mexico), primarily on offshore islands (Stewart *et al.*, 1994), from December to March (Stewart and Huber, 1993). Males feed near the eastern Aleutian Islands and in the Gulf of Alaska, and females feed further south, south of 45° N (Stewart and Huber, 1993; Le Boeuf *et al.*, 1993). Adults return to land between March and August to molt, with males returning later than females. Adults return to their feeding areas again between their spring/summer molting and their winter breeding seasons.

During PISCO research activities, the maximum number of northern elephant seals observed at a single site was at least 10 adults plus 10-20 sub-adults and pups. These were observed offshore of Piedras Blancas. One adult elephant seal has been observed at Pigeon Point. At other sites, elephant seals are very rarely observed during research activities.

California Sea Lion

California sea lions are not listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. The California sea lion is now a full species, separated from the Galapagos sea lion (*Z. wollebaeki*) and the extinct Japanese sea lion (*Z. japonicus*) (Brunner, 2003; Wolf *et al.*, 2007; Schramm *et al.*, 2009). The estimated population of the U.S. stock of California sea lion is approximately 296,750 animals with a minimum of 153,337 individuals, and the current maximum population growth rate is 12 percent (Carretta *et al.*, 2014).

California sea lion breeding areas are on islands located in southern California, in western

Baja California, Mexico, and the Gulf of California. During the breeding season, most California sea lions inhabit southern California and Mexico. Rookery sites in southern California are limited to the San Miguel Islands and the southerly Channel Islands of San Nicolas, Santa Barbara, and San Clemente (Carretta *et al.*, 2014). Males establish breeding territories during May through July on both land and in the water. Females come ashore in mid-May and June where they give birth to a single pup approximately 4-5 days after arrival and will nurse pups for about a week before going on their first feeding trip. Females will alternate feeding trips with nursing bouts until the pup is weaned between 4 and 10 months of age (NMML, 2010). In central California, a small number of pups are born on Ano Nuevo Island, Southeast Farallon Island, and occasionally at a few other locations; otherwise, the central California population is composed of non-breeders.

A 2005 haul-out count of California sea lions between the Oregon/California border and Point Conception as well as the Channel Islands found 141,842 individuals (Carretta *et al.*, 2010). The number of sea lions found at any one of PISCO's study sites is variable, and often no California sea lions are observed during sampling.

Pacific Harbor Seal

Pacific harbor seals are not listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. The estimated population of the California stock of Pacific harbor seals is approximately 30,196 animals with a minimum estimated population size of 26,667 (Carretta *et al.*, 2014). No current estimation of annual growth rate has been made for the California stock (Carretta *et al.*, 2014). A 1999 census of the Oregon/Washington harbor seal stock found 16,165 individuals, of which 5,735 were in Oregon (Carretta *et al.*, 2014). This stock is growing at a maximum annual rate of 12% (Carretta *et al.*, 2014).

The animals inhabit near-shore coastal and estuarine areas from Baja California, Mexico, to the Pribilof Islands in Alaska. Pacific harbor seals are divided into two subspecies: P. v. stejnegeri in the western North Pacific, near Japan, and P. v. richardii in the northeast Pacific Ocean. The latter subspecies, recognized as three separate stocks, inhabits the west coast of the continental U.S., including: the outer coastal waters of Oregon and Washington states; Washington state inland waters; and Alaska coastal and inland waters.

In California, over 500 harbor seal haulout sites are widely distributed along the mainland and offshore islands, and include rocky shores, beaches and intertidal sandbars (Lowry *et al.*, 2005). Harbor seals mate at sea, and females give birth during the spring and summer, although, the pupping season varies with latitude. Pups are nursed for an average of 24 days and are ready to swim minutes after being born. Harbor seal pupping takes place at many locations, and rookery size varies from a few pups to many hundreds of pups. Pupping generally occurs between March and June, and molting occurs between May and July (NCCOS, 2007).

At several sites, harbor seals are often observed and have the potential to be disturbed by researchers accessing or sampling the site. The largest number of harbor seals occurs at Hopkins where often 20-30 adults and 10-15 pups are hauled-out on a small beach adjacent to the sampling site.

Other Marine Mammals in the Proposed Action Area

California (southern) sea otters (*Enhydra lutris nereis*), listed as threatened under the ESA and categorized as depleted under the MMPA, usually range in coastal waters within 2 km (1.2 mi) of shore. This species is managed by the U.S. Fish and Wildlife Service and is not considered further in this notice.

Potential Effects of the Specified Activity on Marine Mammals

This section includes a summary and discussion of the ways that the types of stressors associated with the specified activity (e.g., personnel presence) have been observed to impact marine mammals. This discussion may also include reactions that we consider to rise to the level of a take and those that we do not consider to rise to the level of a take (for example, with acoustics, we may include a discussion of studies that showed animals not reacting at all to sound or exhibiting barely measurable avoidance). This section is intended as a background of potential effects and does not consider either the specific manner in which this activity will be carried out or the mitigation that will be implemented, and how either of those will shape the anticipated impacts from this specific activity. The “Estimated Take by Incidental Harassment” section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The “Negligible Impact Analysis” section will include the analysis of how this specific activity will impact marine mammals and will consider the content of this section, the “Estimated Take by Incidental Harassment” section, the “Proposed Mitigation” section, and the “Anticipated Effects on Marine Mammal Habitat” section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and from that on the affected marine mammal populations or stocks.

The appearance of researchers may have the potential to cause Level B harassment of any pinnipeds hauled out at sampling sites. Although marine mammals are never deliberately approached by survey personnel, approach may be unavoidable if pinnipeds are hauled out in the immediate vicinity of the permanent study plots. Disturbance may result in reactions ranging from an animal simply becoming alert to the presence of researchers (e.g., turning the head, assuming a more upright posture) to flushing from the haul-out site into the water. NMFS does not consider the lesser reactions to constitute behavioral harassment, or Level B harassment

takes, but rather assumes that pinnipeds that move greater than 1 m (3.3 ft) or change the speed or direction of their movement in response to the presence of researchers are behaviorally harassed, and thus subject to Level B taking. Animals that respond to the presence of researchers by becoming alert, but do not move or change the nature of locomotion as described, are not considered to have been subject to behavioral harassment.

Numerous studies have shown that human activity can flush harbor seals off haulout sites (Allen *et al.*, 1985; Calambokidis *et al.*, 1991; Suryan and Harvey, 1999). The Hawaiian monk seal (*Monachus schauinslandi*) has been shown to avoid beaches that have been disturbed often by humans (Kenyon, 1972). And in one case, human disturbance appeared to cause Steller sea lions to desert a breeding area at Northeast Point on St. Paul Island, Alaska (Kenyon, 1962).

There are three ways in which disturbance, as described previously, could result in more than Level B harassment of marine mammals. All three are most likely to be consequences of stampeding, a potentially dangerous occurrence in which large numbers of animals succumb to mass panic and rush away from a stimulus, an occurrence that is not expected at the proposed sampling sites. The three situations are (1) falling when entering the water at high-relief locations; (2) extended separation of mothers and pups; and (3) crushing of elephant seal pups by large males during a stampede.

Because hauled-out animals may move towards the water when disturbed, there is the risk of injury if animals stampede towards shorelines with precipitous relief (e.g., cliffs). However, while cliffs do exist along the coast, shoreline habitats near the abalone study sites are of steeply sloping rocks with unimpeded and non-obstructive access to the water. If disturbed, hauled-out animals in these situations may move toward the water without risk of encountering barriers or hazards that would otherwise prevent them from leaving the area. In these

circumstances, the risk of injury, serious injury, or death to hauled-out animals is very low.

Thus, research activity poses no risk that disturbed animals may fall and be injured or killed as a result of disturbance at high-relief locations.

Anticipated Effects on Marine Mammal Habitat

The only habitat modification associated with the proposed activity is the placement of permanent bolts and other sampling equipment in the intertidal. Bolts are installed during the set-up of a site and, at existing sites, this has already occurred. In some instances, bolts will need to be replaced or installed for new plots. Bolts are 7.6 to 12.7 cm (2 to 5 in) long, stainless steel 1 cm (3/8 in) Hex or Carriage bolts. They are installed by drilling a hole with a battery powered DeWalt 24 volt rotary hammer drill with a 1 cm (3/8 in) bit. The bolts protrude 1.3-7.6 cm (0.5-3 in) above the rock surface and are held in place with marine epoxy. Although the drill does produce noticeable noise, researchers have never observed an instance where near-by or offshore marine mammals were disturbed by it. Any marine mammal at the site would likely be disturbed by the presence of researchers and retreat to a distance where the noise of the drill would not increase the disturbance. In most instances, wind and wave noise also drown out the noise of the drill. The installation of bolts and other sampling equipment is conducted under the appropriate permits (Monterey Bay National Marine Sanctuary, California State Parks). Once a particular study has ended, the respective sampling equipment is removed. No trash or field gear is left at a site. Thus, the proposed activity is not expected to have any habitat-related effects, including to marine mammal prey species, that could cause significant or long-term consequences for individual marine mammals or their populations.

Proposed Mitigation

In order to issue an incidental take authorization (ITA) under section 101(a)(5)(D) of the

MMPA, NMFS must, where applicable, set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (where relevant).

Mitigation Measures

PISCO proposes to implement several mitigation measures to reduce potential take by Level B (behavioral disturbance) harassment. Measures include: (1) conducting slow movements and staying close to the ground to prevent or minimize stampeding; (2) avoiding loud noises (i.e., using hushed voices); (3) avoiding pinnipeds along access ways to sites by locating and taking a different access way and vacating the area as soon as sampling of the site is completed; (4) monitoring the offshore area for predators (such as killer whales and white sharks) and avoid flushing of pinnipeds when predators are observed in nearshore waters; (5) using binoculars to detect pinnipeds before close approach to avoid being seen by animals; (6) only flushing pinnipeds if they are located in the sampling plots and there are no other means to accomplish the survey (however, flushing must be done slowly and quietly so as not to cause a stampede); (7) no intentional flushing if pups are present at the sampling site; and (8) rescheduling sampling if Steller sea lions are present at the site.

The methodologies and actions noted in this section will be utilized and included as mitigation measures in any issued IHA to ensure that impacts to marine mammals are mitigated to the lowest level practicable. The primary method of mitigating the risk of disturbance to pinnipeds, which will be in use at all times, is the selection of judicious routes of approach to study sites, avoiding close contact with pinnipeds hauled out on shore, and the use of extreme

caution upon approach. In no case will marine mammals be deliberately approached by survey personnel, and in all cases every possible measure will be taken to select a pathway of approach to study sites that minimizes the number of marine mammals potentially harassed. In general, researchers will stay inshore of pinnipeds whenever possible to allow maximum escape to the ocean. Each visit to a given study site will last for approximately 4-6 hours, after which the site is vacated and can be re-occupied by any marine mammals that may have been disturbed by the presence of researchers. By arriving before low tide, worker presence will tend to encourage pinnipeds to move to other areas for the day before they haul out and settle onto rocks at low tide.

PISCO will suspend sampling and monitoring operations immediately if an injured marine mammal is found in the vicinity of the project area and the monitoring activities could aggravate its condition.

Mitigation Conclusions

NMFS has carefully evaluated PISCO's proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

- The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;
- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and
- The practicability of the measure for applicant implementation.

Any mitigation measure(s) prescribed by NMFS should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

1. Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).

2. A reduction in the numbers of marine mammals (total number or number at biologically important time or location) exposed to activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).

3. A reduction in the number of times (total number or number at biologically important time or location) individuals would be exposed to activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).

4. A reduction in the intensity of exposures (either total number or number at biologically important time or location) to activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing the severity of harassment takes only).

5. Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/disturbance of habitat during a biologically important time.

6. For monitoring directly related to mitigation – an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular

attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an ITA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must, where applicable, set forth “requirements pertaining to the monitoring and reporting of such taking”. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. PISCO submitted a marine mammal monitoring plan as part of the IHA application. It can be found in Section 13 of the application. The plan may be modified or supplemented based on comments or new information received from the public during the public comment period.

Monitoring measures proposed by the applicant or prescribed by NMFS should accomplish one or more of the following top-level goals:

1. An increase in our understanding of the likely occurrence of marine mammal species in the vicinity of the action, i.e., presence, abundance, distribution, and/or density of species.
2. An increase in our understanding of the nature, scope, or context of the likely exposure of marine mammal species to any of the potential stressor(s) associated with the action (e.g. sound or visual stimuli), through better understanding of one or more of the following: the action itself and its environment (e.g. sound source characterization, propagation, and ambient noise levels); the affected species (e.g. life history or dive pattern); the likely co-occurrence of marine mammal species with the action (in whole or part) associated with specific adverse effects; and/or the likely biological or behavioral context of exposure to the stressor for the marine

mammal (e.g. age class of exposed animals or known pupping, calving or feeding areas).

3. An increase in our understanding of how individual marine mammals respond (behaviorally or physiologically) to the specific stressors associated with the action (in specific contexts, where possible, e.g., at what distance or received level).

4. An increase in our understanding of how anticipated individual responses, to individual stressors or anticipated combinations of stressors, may impact either: the long-term fitness and survival of an individual; or the population, species, or stock (e.g. through effects on annual rates of recruitment or survival).

5. An increase in our understanding of how the activity affects marine mammal habitat, such as through effects on prey sources or acoustic habitat (e.g., through characterization of longer-term contributions of multiple sound sources to rising ambient noise levels and assessment of the potential chronic effects on marine mammals).

6. An increase in understanding of the impacts of the activity on marine mammals in combination with the impacts of other anthropogenic activities or natural factors occurring in the region.

7. An increase in our understanding of the effectiveness of mitigation and monitoring measures.

8. An increase in the probability of detecting marine mammals (through improved technology or methodology), both specifically within the safety zone (thus allowing for more effective implementation of the mitigation) and in general, to better achieve the above goals.

PISCO can add to the knowledge of pinnipeds in California and Oregon by noting observations of: (1) unusual behaviors, numbers, or distributions of pinnipeds, such that any potential follow-up research can be conducted by the appropriate personnel; (2) tag-bearing

carcasses of pinnipeds, allowing transmittal of the information to appropriate agencies and personnel; and (3) rare or unusual species of marine mammals for agency follow-up.

Proposed monitoring requirements in relation to PISCO's rocky intertidal monitoring will include observations made by the applicant. Information recorded will include species counts (with numbers of pups/juveniles when possible), numbers of observed disturbances, and descriptions of the disturbance behaviors during the monitoring surveys, including location, date, and time of the event. In addition, observations regarding the number and species of any marine mammals observed, either in the water or hauled out, at or adjacent to the site, will be recorded as part of field observations during research activities. Observations of unusual behaviors, numbers, or distributions of pinnipeds will be reported to NMFS so that any potential follow-up observations can be conducted by the appropriate personnel. In addition, observations of tag-bearing pinniped carcasses as well as any rare or unusual species of marine mammals will be reported to NMFS. Information regarding physical and biological conditions pertaining to a site, as well as the date and time that research was conducted will also be noted.

If at any time injury, serious injury, or mortality of the species for which take is authorized should occur, or if take of any kind of any other marine mammal occurs, and such action may be a result of the proposed research, PISCO will suspend research activities and contact NMFS immediately to determine how best to proceed to ensure that another injury or death does not occur and to ensure that the applicant remains in compliance with the MMPA.

A draft final report must be submitted to NMFS Office of Protected Resources within 60 days after the conclusion of the 2014-2015 field season or 60 days prior to the start of the next field season if a new IHA will be requested. The report will include a summary of the information gathered pursuant to the monitoring requirements set forth in the IHA. A final

report must be submitted to the Director of the NMFS Office of Protected Resources and to the NMFS West Coast Regional Administrator within 30 days after receiving comments from NMFS on the draft final report. If no comments are received from NMFS, the draft final report will be considered to be the final report.

Monitoring Results from Previously Authorized Activities

PISCO complied with the mitigation and monitoring that we required under the IHA issued in December 2013. In compliance with the IHA, PISCO submitted a report detailing the activities and marine mammal monitoring they conducted. The IHA required PISCO to conduct counts of pinnipeds present at study sites prior to approaching the sites and to record species counts and any observed reactions to the presence of the researchers.

From December 17, 2013, through August 31, 2014, PISCO researchers conducted rocky intertidal sampling at 65 sites during 50 days (see Table 6 in PISCO's 2013-2014 report). During this time period, no injured, stranded, or dead pinnipeds were observed. Tables 7, 8, and 9 in PISCO's monitoring report (see ADDRESSES) outline marine mammal observations and reactions. Level B harassment takes of harbor seals, California sea lions, and northern elephant seals included short movements of 1-3 m (3.3-10 ft) away from researchers and in some instances flushing into the water.

Based on the results from the previous monitoring report, we conclude that these results support our original findings that the mitigation measures set forth in the 2013-2014 IHA effected the least practicable impact on the species or stocks. During periods of low tide (e.g., when tides are 0.6 m (2 ft) or less and low enough for pinnipeds to haul-out), we would expect the pinnipeds to return to the haulout site within 60 minutes of the disturbance (Allen *et al.*, 1985). The effects to pinnipeds appear at the most to displace the animals temporarily from their

haul out sites, and we do not expect that the pinnipeds would permanently abandon a haul-out site during the conduct of rocky intertidal surveys.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

All anticipated takes would be by Level B harassment, involving temporary changes in behavior. The proposed mitigation and monitoring measures are expected to minimize the possibility of injurious or lethal takes such that take by injury, serious injury, or mortality is considered remote. Animals hauled out close to the actual survey sites may be disturbed by the presence of biologists and may alter their behavior or attempt to move away from the researchers.

As discussed earlier, NMFS considers an animal to have been harassed if it moved greater than 1 m (3.3 ft) in response to the researcher’s presence or if the animal was already moving and changed direction and/or speed, or if the animal flushed into the water. Animals that became alert without such movements were not considered harassed.

For the purpose of this proposed IHA, only Oregon and California sites that are frequently sampled and have a marine mammal presence during sampling were included in take estimates. Sites where only Biodiversity Surveys are conducted were not included due to the infrequency of sampling and rarity of occurrences of pinnipeds during sampling. In addition,

Steller sea lions are not included in take estimates as they will not be disturbed by researchers or research activities since activities will not occur or will be suspended if Steller sea lions are present. A small number of harbor seal and northern elephant seal pup takes are anticipated as pups may be present at several sites during spring and summer sampling.

Takes estimates are based on marine mammal observations from each site. Marine mammal observations are done as part of PISCO site observations, which include notes on physical and biological conditions at the site. The maximum number of marine mammals, by species, seen at any given time throughout the sampling day is recorded at the conclusion of sampling. A marine mammal is counted if it is seen on access ways to the site, at the site, or immediately up-coast or down-coast of the site. Marine mammals in the water immediately offshore are also recorded. Any other relevant information, including the location of a marine mammal relevant to the site, any unusual behavior, and the presence of pups is also noted.

These observations formed the basis from which researchers with extensive knowledge and experience at each site estimated the actual number of marine mammals that may be subject to take. In most cases the number of takes is based on the maximum number of marine mammals that have been observed at a site throughout the history of the site (1-3 observation per year for 5-10 years or more). Section 6 in PISCO's application outlines the number of visits per year for each sampling site and the potential number of pinnipeds anticipated to be encountered at each site. Table 4 in PISCO's application outlines the number of potential takes per site (see ADDRESSES).

Based on this information, NMFS proposes to authorize the take, by Level B harassment only, of 55 California sea lions, 183 harbor seals, and 30 northern elephant seals. These numbers are considered to be maximum take estimates; therefore, actual take may be slightly less if

animals decide to haul out at a different location for the day or animals are out foraging at the time of the survey activities.

Analysis and Preliminary Determinations

Negligible Impact

Negligible impact is “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival” (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be “taken” through behavioral harassment, NMFS must consider other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, feeding, migration, etc.), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, effects on habitat, and the status of the species.

No injuries or mortalities are anticipated to occur as a result of PISCO’s rocky intertidal monitoring, and none are proposed to be authorized. The behavioral harassments that could occur would be of limited duration, as researchers only conduct sampling one to two times per year at each site for a total of 4-6 hours per sampling event. Therefore, disturbance will be limited to a short duration, allowing pinnipeds to reoccupy the sites within a short amount of time.

The risk of marine mammal injury, serious injury, or mortality associated with rocky

intertidal monitoring increases somewhat if disturbances occur during breeding season. These situations present increased potential for mothers and dependent pups to become separated and, if separated pairs do not quickly reunite, the risk of mortality to pups (through starvation) may increase. Separately, adult male elephant seals may trample elephant seal pups if disturbed, which could potentially result in the injury, serious injury, or mortality of the pups. The risk of either of these situations is greater in the event of a stampede.

Very few pups are anticipated to be encountered during the proposed monitoring surveys. No California sea lion pups are anticipated to be encountered, as rookery sites are typically limited to the islands. A very small number of harbor seal and northern elephant seal pups have been observed at a couple of the proposed monitoring sites over the past years. Though elephant seal pups are occasionally present when researchers visit survey sites, risk of pup mortalities is very low because elephant seals are far less reactive to researcher presence than the other two species. Further, pups are typically found on sand beaches, while study sites are located in the rocky intertidal zone, meaning that there is typically a buffer between researchers and pups. Finally, the caution used by researchers in approaching sites generally precludes the possibility of behavior, such as stampeding, that could result in extended separation of mothers and dependent pups or trampling of pups. No research would occur where separation of mother and her nursing pup or crushing of pups can become a concern.

Typically, even those reactions constituting Level B harassment would result at most in temporary, short-term disturbance. In any given study season, researchers will visit sites one to two times per year for a total of 4-6 hours per visit. Therefore, disturbance of pinnipeds resulting from the presence of researchers lasts only for short periods of time and is separated by significant amounts of time in which no disturbance occurs. Because such disturbance is

sporadic, rather than chronic, and of low intensity, individual marine mammals are unlikely to incur any detrimental impacts to vital rates or ability to forage and, thus, loss of fitness. Correspondingly, even local populations, much less the overall stocks of animals, are extremely unlikely to accrue any significantly detrimental impacts.

Some of the pinniped species may use some of the sites during certain times of year to conduct pupping and/or breeding. However, some of these species prefer to use the offshore islands for these activities. At the sites where pups may be present, PISCO has proposed to implement certain mitigation measures, such as no intentional flushing if dependent pups are present, which will avoid mother/pup separation and trampling of pups.

Of the three marine mammal species anticipated to occur in the proposed activity areas, none are listed under the ESA. Taking into account the mitigation measures that are planned, effects to marine mammals are generally expected to be restricted to short-term changes in behavior or temporary abandonment of haulout sites, falling within the MMPA definition of “Level B harassment.” Pinnipeds are not expected to permanently abandon any area that is surveyed by researchers, as is evidenced by continued presence of pinnipeds at the sites during annual monitoring counts. Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed mitigation and monitoring measures, NMFS preliminarily finds that the total marine mammal take from PISCO’s rocky intertidal monitoring program will not adversely affect annual rates of recruitment or survival and therefore will have a negligible impact on the affected species or stocks.

Small Numbers

Table 1 in this document presents the abundance of each species or stock, the proposed

take estimates, the percentage of the affected populations or stocks that may be taken by harassment, and the species or stock trends. Based on these estimates, PISCO would take less than 1.1% of each species or stock. Because these are maximum estimates, actual take numbers are likely to be lower, as some animals may select other haulout sites the day the researchers are present.

Table 1. Population abundance estimates, total proposed Level B take, and percentage of population that may be taken for the potentially affected species during the proposed rocky intertidal monitoring program.

Species	Abundance*	Total Proposed Level B Take	Percentage of Stock or Population
Harbor Seal	30,196 ¹ 16,165 ²	183	0.6-1.1
California Sea Lion	296,750	60	0.02
Northern Elephant Seal	124,000	30	0.02

*Abundance estimates are taken from the 2013 U.S. Pacific Marine Mammal Stock Assessments (Carretta *et al.*, 2014).

¹ California stock abundance estimate; ² Oregon/Washington stock abundance estimate

Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act (ESA)

None of the marine mammals for which incidental take is proposed are listed as threatened or endangered under the ESA. NMFS' Permits and Conservation Division worked with the NMFS Southwest Regional Office to ensure that Steller sea lions would be avoided and incidental take would not occur. Therefore, NMFS has determined that issuance of the proposed IHA to PISCO under section 101(a)(5)(D) of the MMPA will have no effect on species listed as threatened or endangered under the ESA.

National Environmental Policy Act (NEPA)

In 2012, we prepared an EA analyzing the potential effects to the human environment from conducting rocky intertidal surveys along the California and Oregon coasts and issued a Finding of No Significant Impact (FONSI) on the issuance of an IHA for PISCO's rocky intertidal surveys in accordance with section 6.01 of the NOAA Administrative Order 216-6 (Environmental Review Procedures for Implementing the National Environmental Policy Act, May 20, 1999). PISCO's proposed activities and impacts for 2014-2015 are within the scope of our 2012 EA and FONSI. We have reviewed the 2012 EA and determined that there are no new direct, indirect, or cumulative impacts to the human and natural environment associated with the IHA requiring evaluation in a supplemental EA and we, therefore, intend to reaffirm the 2012 FONSI.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to PISCO for the take of marine mammals incidental to conducting rocky intertidal monitoring research activities, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. The proposed IHA language is provided next.

This section contains a draft of the IHA itself. The wording contained in this section is proposed for inclusion in the IHA (if issued).

1. This IHA is valid from December 17, 2014, through December 16, 2015.
2. This IHA is valid only for specified activities associated with rocky intertidal monitoring surveys at specific sites along the U.S. California and Oregon coasts.
3. General Conditions
 - a. A copy of this IHA must be in the possession of personnel operating under the authority of this authorization.

b. The incidental taking of marine mammals, by Level B harassment only, is limited to the following species along the Oregon and California coasts:

- i. 183 harbor seal (*Phoca vitulina richardii*);
- ii. 60 California sea lion (*Zalophus californianus*); and
- iii. 30 northern elephant seal (*Mirounga angustirostris*).

c. The taking by injury (Level A harassment), serious injury, or death of any of the species listed in condition 3(b) of the IHA or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.

4. Mitigation Measures: In order to ensure the least practicable impact on the species listed in condition 3(b), the holder of this IHA is required to implement the following mitigation measures:

a. Field biologists must approach study sites cautiously and quietly, such that any disturbance of pinnipeds is minimized. The pathway and rate of approach must be chosen judiciously, avoiding to the extent possible any deliberate approach of hauled-out pinnipeds. If deliberate approach is unavoidable, field biologists must approach gradually such that stampeding of pinnipeds is avoided. Specific care must be taken to avoid any disturbance that may place pinniped pups at risk. Site visits should be limited to no more than 6 hours in the absence of extenuating circumstances, and personnel shall vacate the area as soon as sampling of the site is completed.

b. Staff shall use binoculars to detect pinnipeds before close approach to avoid being seen by the animals.

c. Staff shall monitor the offshore area for predators (such as killer whales and white sharks) and avoid flushing of pinnipeds when predators are observed in nearshore waters.

d. Staff shall reschedule work at sites where pups are present, unless other means to accomplishing the work can be done without causing disturbance to mothers and dependent pups.

e. Staff shall only flush pinnipeds if they are located in the sampling plots and there are no other means to accomplish the survey (however, flushing must be done slowly and quietly so as not to cause a stampede).

f. No intentional flushing if pups are present at the sampling site.

g. Sampling shall be rescheduled if Steller sea lions are present at the study site.

5. Monitoring: The holder of this IHA is required to conduct monitoring of marine mammals present at study sites prior to approaching the sites.

a. Information to be recorded shall include the following:

i. Species counts (with numbers of pups/juveniles); and

ii. Numbers of disturbances, by species and age, according to a three-point scale of intensity including (1) Head orientation in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position and/or slight movement of less than 1 m; “alert”; (2) Movements in response to or away from disturbance, typically over short distances (1-3 m) and including dramatic changes in direction or speed of locomotion for animals already in motion; “movement”; and (3) All flushes to the water as well as lengthier retreats (> 3 m); “flight”.

6. Reporting: The holder of this IHA is required to:

a. Report observations of unusual behaviors, numbers, or distributions of pinnipeds, or of tag-bearing carcasses, to NMFS Southwest Fisheries Science Center (SWFSC).

b. Submit a draft monitoring report to NMFS Office of Protected Resources within 60 days after the conclusion of the 2014-2015 field season or 60 days prior to the start of the next field season if a new IHA will be requested. A final report shall be prepared and submitted within 30 days following resolution of any comments on the draft report from NMFS. This report must contain the informational elements described above, at minimum.

c. Reporting injured or dead marine mammals:

i. In the event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as an injury (Level A harassment), serious injury, or mortality, PISCO shall immediately cease the specified activities and report the incident to the Office of Protected Resources (301-427-8401), NMFS, and the Southwest Regional Stranding Coordinator (562-980-3230), NMFS. The report must include the following information:

1. Time and date of the incident;
2. Description of the incident;
3. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
4. Description of all marine mammal observations in the 24 hours preceding the incident;
5. Species identification or description of the animal(s) involved;
6. Fate of the animal(s); and
7. Photographs or video footage of the animal(s).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with PISCO to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. PISCO may not resume the activities until notified by NMFS.

ii. In the event that an injured or dead marine mammal is discovered and it is determined that the cause of the injury or death is unknown and the death is relatively recent (e.g., in less than a moderate state of decomposition), PISCO shall immediately report the incident to the Office of Protected Resources, NMFS, and the Southwest Regional Stranding Coordinator, NMFS. The report must include the same information identified in 6(c)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with PISCO to determine whether additional mitigation measures or modifications to the activities are appropriate.

iii. In the event that an injured or dead marine mammal is discovered and it is determined that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), PISCO shall report the incident to the Office of Protected Resources, NMFS, and the Southwest Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. PISCO shall provide photographs or video footage or other documentation of the stranded animal sighting to NMFS. Activities may continue while NMFS reviews the circumstances of the incident.

7. This IHA may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

Request for Public Comments

NMFS requests comment on our analysis, the draft authorization, and any other aspect of

the Notice of Proposed IHA for PISCO's proposed rocky intertidal monitoring program. Please include with your comments any supporting data or literature citations to help inform our final decision on PISCO's request for an MMPA authorization.

Dated: October 2, 2014.

Perry F. Gayaldo,
Deputy Director,
Office of Protected Resources,
National Marine Fisheries Service.

[FR Doc. 2014-23927 Filed 10/07/2014 at 8:45 am; Publication Date: 10/08/2014]